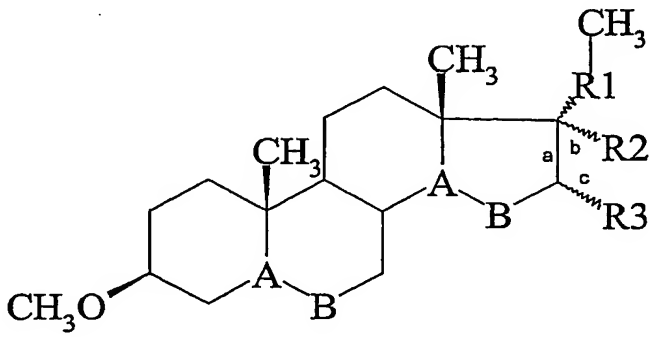
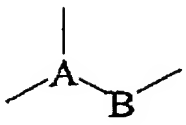
Claims

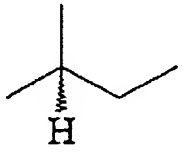
1. The use of 3-methoxy-PREG or a molecule derived from pregnenolone that contains a 3-methoxy function and is incapable of being converted into a metabolite or ester sulfate of pregnenolone, for the preparation of a drug to stimulate the polymerization and/or the stabilization of microtubules to treat an acute or chronic lesion or a degenerative disease of the nervous system, with the aforementioned molecule presenting formula I:



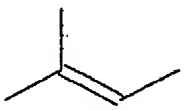
in which:



represents



or

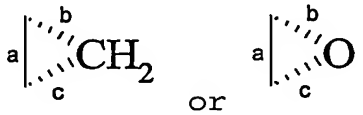


R1 = -CO-; -CH(OH)- or -CH(O-$COCH_3$)-

R2 = H or $CHCl_2$,

R3 = H or CH_3, or

R2 and R3 together form a ring:



2. The use according to claim 1, wherein the aforementioned disease is selected from the group comprising Alzheimer's disease, Parkinson's disease, age-induced memory loss,

memory loss induced by the taking of substances, a traumatic lesion, a cerebral lesion, a lesion of the spinal cord, in particular medullary compression, ischemia, pain, notably neuritic pain, nerve degeneration, and multiple sclerosis.

3. The use according to claim 1 or 2, wherein the aforementioned drug also comprises an excipient that makes it possible to formulate the aforementioned molecule derived from pregnenolone to cross the blood-brain barrier.

4. The use according to one of the claims 1 to 3, wherein the aforementioned drug is presented in an injectable form.

5. The use according to one of the claims 1 to 3, wherein the aforementioned drug is presented in a form allowing it to be taken orally.

6. The use according to one of the claims 1 to 5, wherein the aforementioned molecule is 3-methoxy-PREG.

7. The use according to one of the claims 1 to 6, wherein the aforementioned molecule is 3β-methoxy-pregna-5-ene-20-one-17α-dichloromethyl.

8. The use according to one of the claims 1 to 7, wherein the aforementioned drug comprises a quantity of 3-methoxy-pregnenolone or of a derived molecule ranging between 50 and 2500 mg.

9. 3-*methoxy*-pregnenolone as a drug.

10. A pharmaceutical composition, comprising 3-methoxy-pregnenolone or a molecule derived from pregnenolone that contains a 3-methoxy function of general formula I as an active ingredient, and a pharmaceutically acceptable excipient.

11. An *in vitro* method for increasing the stabilization and/or inducing the polymerization of the microtubules in a cell, comprising the step of exposing the aforementioned cell to

the presence of 3-methoxy-pregnenolone at a concentration of approximately 0.5 to 50 μmol.

12. An *in vitro* method for increasing neuritic sprouting in a cell, comprising the step of exposing the aforementioned cell to the presence of 3-methoxy-pregnenolone at a concentration of approximately 0.5 to 50 μmol.